



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,852	10/15/2003	Richard F. Gladney	SMCY-P02-098	9437
28120	7590	07/27/2004	EXAMINER	
ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			SANTOS, ROBERT G	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,852

Applicant(s)

GLADNEY, RICHARD F.

Examiner

Santos G. Robert

Art Unit

3673

[Handwritten signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/15/03 and 1/28, 1/30, 6/16 & 6/17/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13, 14/10 and 16-21/10 is/are allowed.
- 6) ☒ Claim(s) 1-6, 7/1, 8/1, 8/2, 9/1, 9/2, 15, 16-19/1, 16-19/2, 20/2, 21/1 and 21/2 is/are rejected.
- 7) ☒ Claim(s) 7/2, 14/1, 14/2, 20/1 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/28/04, 1/30/04, 6/16/04 & 6/17/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 16 is objected to because of the following informalities: The term "wires" should be changed to --wire--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The scope of the term "rubber-like" as recited in the second line of claims 5 and 6 cannot be properly ascertained, thereby rendering these claims indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 8/2, 19/2, and 21/2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Collom '658 (note especially Figures 1 & 2 and page 1, lines 48-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7/1, 8/1, 15, 19/1 and 21/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658. Summers '751 shows all of the claimed limitations as recited in claims 1, 7/1, 8/1, 15, 19/1 and 21/1 (note especially Figures 1-5 & 7 and page 1, lines 48-60) except for inner and outer springs which are formed from multi-strand coil springs, wherein each multi-strand coil spring includes wire strands each having a helical twist with a direction that is opposite to a twist direction of the multi-strand coil spring and is constructed so as not to have a central cord. Collom '658 provides the basic teaching of a mattress assembly comprising a plurality of multi-strand coil springs (A) wherein each multi-strand coil spring includes wire strands each having a helical twist with a direction that is opposite to a twist direction of the multi-strand coil spring and is constructed so as not to have a central cord (as shown in Figure 1). The skilled artisan would have found it obvious at the time the invention was made to replace the inner and outer springs (2, 1) of the mattress assembly of Summers '751 with the multi-strand coil springs (A) of Collom '658 in order to eliminate sharp coil spring end points which could potentially damage the mattress assembly lining and cover, thereby ensuring enhanced user support and comfort (see Collom '658, page 1, lines 31-33 & 54-57).

Claims 3/1 and 4/3/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658 as applied to claim 1 above, and further in view of Rhinelanders '475. Summers '751, as modified by Collom '658, does not specifically disclose a condition wherein at least one strand of the plurality of the wire strands is made of a different material than another of the wire strands, further wherein the material is selected from the group consisting of steel, bronze and plastic. Rhinelanders '475 provides the basic teaching of a multi-strand coil spring that could be constructed from both steel and iron strands (as described in column 2, lines 19-23). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Summers '751, as modified by Collom '658, with multi-strand coil springs having at least one strand which is made of a different material than another of the wire strands, further wherein the material is selected from the group consisting of steel, bronze and plastic, in order to achieve a desired spring rate (and firmness) without compromising the load carrying-capacity of the springs (see Rhinelanders '475, column 2, lines 20-23).

Claims 3/2 and 4/3/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Rhinelanders '475. Collom '658 does not specifically disclose a condition wherein at least one strand of the plurality of the wire strands is made of a different material than another of the wire strands, further wherein the material is selected from the group consisting of steel, bronze and plastic. Rhinelanders '475 provides the basic teaching of a multi-strand coil spring that could be constructed from both steel and iron strands (as described in column 2, lines 19-23). The skilled artisan would have found it obvious at the time the invention

was made to provide the mattress assembly of Collom '658 with multi-strand coil springs having at least one strand which is made of a different material than another of the wire strands, further wherein the material is selected from the group consisting of steel, bronze and plastic, in order to achieve a desired spring rate (and firmness) without compromising the load carrying-capacity of the springs (see Rhinelanders '475, column 2, lines 20-23).

Claims 5/1 and 6/5/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658 as applied to claim 1 above, and further in view of Marsack '237. Summers '751, as modified by Collom '658, does not specifically disclose the use of a foam or rubber material encasing the coil springs. Marsack '237 provides the basic teaching of a mattress assembly (1) comprising a plurality of coil springs (2) encased within a rubber material (5). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Summers '751, as modified by Collom '658, with a foam or rubber material encasing the coil springs in order to deter corrosion of the springs and to impart additional support for a user positioned thereon, thereby extending the service life of the mattress as well as providing enhanced user comfort.

Claims 5/2 and 6/5/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Marsack '237. Collom '658 does not specifically disclose the use of a foam or rubber material encasing the coil springs. Marsack '237 provides the basic teaching of a mattress assembly (1) comprising a plurality of coil springs (2) encased within a rubber material (5). The skilled artisan would have found it obvious at the time the invention was made to

provide the mattress assembly of Collom '658 with a foam or rubber material encasing the coil springs in order to deter corrosion of the springs and to impart additional support for a user positioned thereon, thereby extending the service life of the mattress as well as providing enhanced user comfort.

Claim 9/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658 as applied to claim 1 above, and further in view of Codos '383. Summers '751, as modified by Collom '658, does not specifically disclose a condition wherein the multi-strand coil springs have a different spring rate than the coil springs. Codos '383 provides the basic teaching of a mattress assembly (10) comprising coil springs of varying spring rates. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Summers '751, as modified by Collom '658, with multi-strand coil springs having a different spring rate than the coil springs in order to create a mattress that includes one or more firmness zones, thereby providing greater specialized user support as desired.

Claim 9/2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Codos '383. Collom '658 does not specifically disclose a condition wherein the multi-strand coil springs have a different spring rate than the coil springs. Codos '383 provides the basic teaching of a mattress assembly (10) comprising coil springs of varying spring rates. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658 with multi-strand coil springs having a different spring rate

than the coil springs in order to create a mattress that includes different firmness zones, thereby providing greater specialized user support as desired.

Claim 16/1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658 as applied to claim 1 above, and further in view of Buckley '715. Summers '751, as modified by Collom '658, does not specifically disclose a condition wherein each coil spring comprises at least three wire strands. Buckley '715 provides the basic teaching of a coil spring comprising at least three or more wires (see page 1, lines 35-43). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Summers '751, as modified by Collom '658, with a plurality of coil springs each comprising at least three wire strands so "that they will possess greater elasticity and durability, and will be far more reliable and exact in their working than single springs are" (see Buckley '715, page 1, lines 30-34).

Claim 16/2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Buckley '715. Collom '658 does not specifically disclose a condition wherein each coil spring comprises at least three wire strands. Buckley '715 provides the basic teaching of a coil spring comprising at least three or more wires (see page 1, lines 35-43). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658 with a plurality of coil springs each comprising at least three wire strands so "that they will possess greater elasticity and durability, and will be far more reliable and exact in their working than single springs are" (see Buckley '715, page 1, lines 30-34).

Claims 17/1 and 18/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summers '751 in view of Collom '658 as applied to claim 1 above, and further in view of Sitton '097. Summers '751, as modified by Collom '658, does not specifically disclose a condition wherein the multi-strand wires are provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating. Sitton '097 provides the basic teaching of a coil spring (W) provided with a coating formed from an epoxy plastic compound. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Summers '751, as modified by Collom '658, with multi-strand wires provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating in order to provide coil springs which are corrosion-resistant, thereby extending the service life of the mattress assembly.

Claims 17/2 and 18/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Sitton '097. Collom '658 does not specifically disclose a condition wherein the multi-strand wires are provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating. Sitton '097 provides the basic teaching of a coil spring (W) provided with a coating formed from an epoxy plastic compound. The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658 with multi-strand wires provided with a protective coating selected from the group consisting of galvanized exterior, plastic and epoxy overcoating in order

Art Unit: 3673

to provide coil springs which are corrosion-resistant, thereby extending the service life of the mattress assembly.

Claim 20/2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collom '658 in view of Marshall '160. Collom '658 does not specifically disclose a condition wherein the mattress core comprises a pocketed coil mattress core. Marshall '160 provides the basic teaching of a mattress core (G) comprising a plurality of coils (D) each enclosed within a pocket (E). The skilled artisan would have found it obvious at the time the invention was made to provide the mattress assembly of Collom '658 with a pocketed coil mattress core in order to reduce noise produced by compression of the coil springs when a user is positioned on the mattress assembly, thereby helping to provide enhanced user comfort.

Allowable Subject Matter

Claims 10-13, 14/10 and 16-21/10 are allowed.

Claims 7/2, 14/1, 14/2, 20/1 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fischmann '510.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert G. Santos whose telephone number is (703) 308-7469. The examiner can normally be reached on Tues-Fr and first Mondays, 10:30 a.m. to 8:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.S.
July 18, 2004


ROBERT G. SANTOS
PRIMARY EXAMINER